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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,461

01/05/2006

Warren Smook

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1343

466

7590

03/08/2010

YOUNG & THOMPSON

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EXAMINER

LEWIS, TISHA D

ART UNIT

PAPER NUMBER

3655

NOTIFICATION DATE

DELIVERY MODE

03/08/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

Office Action Summary	Application No. 10/563,461	Applicant(s) SMOOK ET AL.	
	Examiner TISHA D. LEWIS	Art Unit 3655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15 and 16 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

The following is a response to the request for reconsideration received on November 9, 2009.

Information Disclosure Statement

The information disclosure statement filed 9/25/09 has been considered.

Response to Arguments

Claims 1-13, 15 and 16 are pending in the application. Claim 14 is cancelled.

-The examiner has, upon further consideration of the previously amended claim 1, withdrawn the WO '891 art from the 103(a) rejections due to the art not having the spaced shafts supporting and locating the taper bearings which the examiner feels should be provided by the secondary art used in the rejections. Although the WO '891 art has been withdrawn, applicant's declaration under rule 132 and arguments are still not persuasive.

-Applicant's declaration has been acknowledged and reviewed; however, the declaration is purely argumentative. The showing of unexpected results must be based on evidence, not argument in which the current declaration provides no factual evidence or actual proof supporting the statements that the prior art preferred to use SRB's instead of TRB's due to degrees of freedom. Although the prior art of record used in the rejections use SRB's, these arts also do not support applicant's claim (or mention in the arts themselves) that SRB's are preferred to be used over other bearings, particularly TRB's at the time the present invention was filed. ***MPEP 716.01(c) [R-2] and 716.02***

-As to applicant's argument, due to the WO '891 art being withdrawn from the 103(a) rejections, no response is necessary.

Claim Objections

Claim 2 is objected to because of the following informalities: "are" should be inserted between "gears" and "arranged". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/079644 in view of WO 0157398 (US publication 20030123984). As to claim 1, WO discloses a sun (14), planet (17) and ring gears (7) and a planet carrier (5), the carrier having circumferentially spaced studs (5b) which support a bogie plate (21), the bogie plate providing support for circumferentially spaced shafts (19) which supports and locates circumferentially spaced planet gear bearings (25) on which the planet gears are mounted. WO doesn't disclose the bearings being taper roller bearings.

WO 398 discloses a planetary gear transmission having a sun, planet and ring gear and a carrier wherein circumferentially spaced shafts (30) support and locate circumferentially spaced planet gear bearings (32) in the form of taper roller bearings on which the planet gears are mounted.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the bearings of WO into taper roller bearings in view of WO 398 to better distribute contact pressure of the rollers due to inclined direction of loading which increases the amount of material available for distributing the load in the interaction with the loads coming from the gears (also see WO 398 paragraphs [0025] to [0029] for further reasons for using taper roller bearings).

As to claim 2, WO discloses the planet gears arranged in axially aligned pairs (17a, 17b are at least two sets).

As to claim 3, WO discloses the bearings (25) supporting the pairs of aligned planet gears.

As to claim 4, WO discloses two pairs of each set positioned on opposite sides of the plate (17a and 17b are on opposite sides of plate 21).

As to claim 5, WO discloses the planet gears being each mounted on a pair of tapered roller bearings (Figure 3, 25 has separate bearings for 17a and 17b).

As to claim 6, WO in view of WO 398 discloses a pair of tapered roller bearings arranged in an O configuration (WO 398, paragraph [0026] discloses that two tapered bearings in O-arrangement results in better stability).

As to claim 7, WO discloses the bearings being supported by a shaft (19) which self adjust in an angular position relative to the plate.

As to claim 8, WO discloses the bearings for some of the planets being supported on a shaft (not referenced) rigidly secured to the bogie plate.

As to claim 9, WO discloses each shaft rigidly secured to the plate.

As to claims 10, 15 and 16, WO discloses the bogie plate (21) being able to deform elastically (slightly resilient) to allow self adjustment of the angular position of each shaft relative to the axis of rotation of the ring gear.

As to claim 11, WO discloses a main bearing (27) having an inner ring bearing surface (27b) of a diameter greater than that of a toothed surface of the ring gear.

As to claim 12, WO discloses the carrier (5) having a radially extending torque path which is torsionally stiff (due to bolting to hub) but relatively compliant in an axial direction parallel with the axis about which the forces act.

Claims 1-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/14690 in view of WO 0157398 (US publication 20030123984). As to claim 1, WO discloses (see Figure 4) a sun, planet and ring gears and a planet carrier, the carrier having circumferentially spaced studs (42) which support a bogie plate (21), the bogie plate providing support for circumferentially spaced shafts (44) which supports and locates circumferentially spaced planet gear bearings on which the planet gears are mounted. WO doesn't disclose the bearings being taper roller bearings.

WO 398 discloses a planetary gear transmission having a sun, planet and ring gear and a carrier wherein circumferentially spaced shafts (30) support and locate circumferentially spaced planet gear bearings (32) in the form of taper roller bearings on which the planet gears are mounted.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the bearings of WO into taper roller bearings in view of

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WO 398 to better distribute contact pressure of the rollers due to inclined direction of loading which increases the amount of material available for distributing the load in the interaction with the loads coming from the gears (also see WO 398 paragraphs [0025] to [0029] for further reasons for using taper roller bearings).

As to claim 2, WO discloses the planet gears arranged in axially aligned pairs (Figure 4).

As to claim 3, WO discloses the bearings supporting the pairs of aligned planet gears (Figure 4).

As to claim 4, WO discloses two pairs of each set positioned on opposite sides of the plate (Figure 4).

As to claim 5, WO discloses the planet gears being each mounted on a pair of tapered roller bearings (Figure 4).

As to claim 6, WO discloses the tapered roller bearings arranged in an O configuration (claim 21).

As to claims 7 and 13, WO discloses the bearings being supported by a shaft (26 flexpin shaft) which self adjust in an angular position relative to the plate.

As to claim 8, WO discloses the bearings for some of the planets being supported on a shaft (not referenced) rigidly secured to the bogie plate.

As to claim 9, WO discloses each shaft rigidly secured to the plate.

As to claims 10, 15 and 16, WO discloses the bogie plate being able to deform elastically to allow self adjustment of the angular position of each shaft relative to the axis of rotation of the ring gear.

As to claim 11, WO discloses a main bearing having an inner ring bearing of a diameter greater than that of a toothed surface of the ring gear (claim 3).

As to claim 12, WO discloses the carrier having a radially extending torque path which is torsionally stiff but relatively compliant in an axial direction parallel with the axis about which the forces act (claim 6).

Claims 1-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/014566 in view of WO 0157398 (US publication 20030123984). As to claim 1, WO discloses (see claim 1) a sun, planet and ring gears and a planet carrier, the carrier having circumferentially spaced studs (42) which support a bogie plate (21), the bogie plate providing support for circumferentially spaced shafts (44) which supports and locates circumferentially spaced planet gear bearings on which the planet gears are mounted. WO doesn't disclose the bearings being taper roller bearings.

WO 398 discloses a planetary gear transmission having a sun, planet and ring gear and a carrier wherein circumferentially spaced shafts (30) support and locate circumferentially spaced planet gear bearings (32) in the form of taper roller bearings on which the planet gears are mounted.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the bearings of WO into taper roller bearings in view of WO 398 to better distribute contact pressure of the rollers due to inclined direction of loading which increases the amount of material available for distributing the load in the

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interaction with the loads coming from the gears (also see WO 398 paragraphs [0025] to [0029] for further reasons for using taper roller bearings).

As to claim 2, WO discloses the planet gears arranged in axially aligned pairs (claim 2).

As to claim 3, WO discloses the bearings supporting the pairs of aligned planet gears (claim 2).

As to claim 4, WO discloses two pairs of each set positioned on opposite sides of the plate (claim 3).

As to claim 5, WO discloses the planet gears being each mounted on a pair of tapered roller bearings (claim 19).

As to claim 6, WO discloses the tapered roller bearings arranged in an O configuration (claim 27).

As to claims 7 and 13, WO discloses the bearings being supported by a shaft (26 flexpin shaft) which self adjust in an angular position relative to the plate (claim 4).

As to claim 8, WO discloses the bearings for some of the planets being supported on a shaft (Figure 4) rigidly secured to the bogie plate.

As to claim 9, WO discloses each shaft rigidly secured to the plate (Figure 4).

As to claims 10, 15 and 16, WO discloses the bogie plate being able to deform elastically to allow self adjustment of the angular position of each shaft relative to the axis of rotation of the ring gear (claims 1 and 4).

As to claim 11, WO discloses a main bearing having an inner ring bearing of a diameter greater than that of a toothed surface of the ring gear (claim 10).

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As to claim 12, WO discloses the carrier having a radially extending torque path which is torsionally stiff but relatively compliant in an axial direction parallel with the axis about which the forces act (claim 13).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 644 in view of WO 398 as applied to claim 1 above, and further in view of WO 690 and WO 566). WO 644 in view of WO 398 disclose the planet gears supported to the bogie plate by a shaft, but does not disclose the shaft being of a flexpin.

Both WO 566 and WO 690 references disclose a shaft (26) being of a flexpin operation due to flexing of component (33).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the shaft (19) of WO 644 in view of WO 398 and further in view of both WO 566 and WO 690 references to isolate axial forces from the planet gears during operation.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4 and 5 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 13 of copending Application No. 12/335898 in view of WO '566, '690 and '644. The limitations of the claims 1, 4 and 5 of the present invention are encompassed in claims 1 and 13 of the co-pending application. The co-pending application doesn't claim that the carrier has circumferentially spaced studs supporting the bogie plate.

The above WO's disclose the limitations of the present invention claim 1 including the carrier having circumferentially spaced studs supporting the bogie plate.

It would have been obvious to provide the co-pending application with studs to support the bogie plate recited in claim 1 of the co-pending application.

This is a provisional obviousness-type double patenting rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-JP 5332407 and Leimann 20040141674.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-F 9:30AM TO 6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tdl
/TISHA D. LEWIS/
Primary Examiner, Art Unit 3655
March 1, 2010